

**REMARKS**

Claims 28-59 are pending in this application. Claims 1-13, 15, 17, 19 and 21-27 have been canceled without prejudice and rewritten as new claims 28-59.

New independent **resin claims 28-30** correspond to canceled claims 21, 10, and 24, respectively.

Claim 28 defines component (C) and excludes an acid-modified polyolefin. Claim 29 recites that the resin composition includes filler (D) blended to provide a density of not less than 1.0 g/cm<sup>3</sup>. Claim 30 requires that the resin composition be provided on at least one side of a paper substrate. Claims 31-41 are directly or indirectly dependant on one or more of claims 28-30.

New independent **paper claims 42-44** are directed to the present water-resistant paper and correspond to canceled claims 15, 12, and 25, respectively.

Claim 42 requires that the resin composition be provided between at least two sheets of a paper substrate. Claim 43 requires that the resin composition be provided directly on at least one side of a paper substrate. Claim 44 requires that the subject paper consist of the substrate having one or more penetration proof layers provided thereon, and where the resin composition is provided on the penetration-proof layers or on another sheet such that the resin composition is in communication with the penetration proof layer.

Claims 45 and 50 are dependent on claim 42 or 43. Claims 46-49 are directed to the present paper, and are dependent on claims 28-30.

New independent **method claims 51-54** correspond to canceled claims 26, 19, 27, and 17, respectively. Claim 51 requires applying the resin composition to at least one side of a paper substrate, and forming a coat layer of a (meth)acrylic resin on the resin composition layer. Claim 52 requires applying the resin composition between at least two sheets of a paper substrate.

Claim 53 requires a method consisting of applying a penetration proof layer, and then applying a resin composition to the penetration proof layer or to another substrate such that the resin composition is in communication with the penetration proof layer.

Claim 54 requires applying the resin composition directly on at least one side of a paper substrate. Claim 57 is dependent on claim 52. Claims 55, 56, and 58, are dependent on claims 28-30. Claim 59 is dependent on claim 58.

Support for new claims 28-59 appears throughout the present specification and claims as originally filed. No new matter has been added.

The Examiner is thanked for indicating claims 15 and 19 allowable if rewritten in independent form.

In view of new claims 28-59 and the remarks set forth below, further and favorable reconsideration is respectfully requested.

*I. At page 2 of the Office Action, claims 1, 4-7, 12, 13, 17, 21, and 23-27, have been rejected under 35 USC § 102(b) as being anticipated by Shigemoto '692.*

The Examiner states that **Shigemoto** meets the limitations of the rejected claims.

**Shigemoto** discloses a laminate structure requiring three layers, A, B, and C.

Regarding claims 12 and 17, the Examiner states that the interlayer (B) of **Shigemoto** provides gas-barrier properties when applied to substrates such as paper. In support of his position, the Examiner points to col. 6 lines 1-2 of **Shigemoto**.

Lines 1-2 do not state that the interlayer provides gas-barrier properties when applied. Rather this passage states, starting at col. 5, last paragraph, that "...the laminate of this invention includes,...and laminates obtained by further laminating a...paper or an aluminum foil onto the above types of laminates in order to impart gas-barrier property. Clearly, this passage teaches that it is the component that is further laminated (i.e., paper, etc.,) onto the inventive 3 or 5 layer laminate, that imparts gas-barrier properties.

Present claims 12 and 17 rewritten as new claims 43 and 54, require the formation of the inventive resin composition on either side of a paper substrate. The noted passage does not teach forming interlayer B on either side of a paper substrate. Rather, **Shigemoto** teaches that layer C, or possibly layer A of **Shigemoto** would contact the component to be further laminated (i.e., paper). ***Shigemoto does not anticipate claims 12 and 17*** (new claims 43 and 54, respectively).

Regarding claims 24 and 26, rewritten as new claims 30 and 51, **Shigemoto** does not teach laminating interlayer B directly to a paper substrate. The Examiner contends that col. 5, lines 13-24,

teach a thermoplastic resin layer A which can be a methacrylic resin layer formed outside the interlayer, which reads on present claims 24 and 26.

The noted passage teaches that layer C is the thermoplastic resin layer, and that layer A is laminated to layer C, through interlayer B. Accordingly, *Shigemoto does not anticipate claims 24 and 26* (new claims 30 and 51, respectively), which claims require the present composition (*Shigemoto's* interlayer B) provided on a paper substrate, and require the (meth)acrylic resin formed on the resin composition layer, because *Shigemoto* does not teach laminating interlayer B directly to a paper substrate.

Regarding claims 25 and 27, rewritten as new claims 44 and 53, these claims recite a water-resistant and moisture-proof paper consisting of the present resin composition, a penetration-proof layer, and a paper substrate, where the penetration-proof layer is formed on the substrate and the resin composition layer is formed on the penetration-proof layer, because *Shigemoto* requires polymer layer A (4-methyl-1-pentene polymer layer). The transition language “consisting of” serves to exclude any elements other than the elements recited, i.e. *Shigemoto's* polymer layer A.

It is submitted that *Shigemoto* does not teach each and every element of the claimed invention as required for anticipation under 35 U.S.C. §102(b). Accordingly, the Examiner is respectfully requested to withdraw this rejection.

**II. At page 3 of the Office Action, claims 1, 4-7, 21 and 23, have been rejected under 35 USC § 102(e) as being anticipated by Mito '119.**

The Examiner states that *Mito* meets the limitations of the rejected claims.

Claim 28, and claims dependent therefrom, have been rewritten to exclude an olefin-carboxylic acid co-polymer or olefin-maleic acid copolymer, from the compatibilizing agent (C).

Claim 29 requires a filler (D).

Claims 30, and claims dependent therefrom, require a sheet of paper where the composition is provided directly on the paper.

It is submitted that **Mito** does not teach each and every element of the claimed invention as required for anticipation under 35 USC §102(b). Accordingly, the Examiner is respectfully requested to withdraw this rejection.

***III. At page 3 of the Office Action, claims 1, 3-7, 21 and 23, have been rejected under 35 USC § 102(b) as being anticipated by Jarvis '999.***

The Examiner states that **Jarvis** meets the limitations of the rejected claims.

Claim 28, and claims dependent therefrom, have been rewritten to exclude an olefin-carboxylic acid co-polymer or olefin-maleic acid copolymer, from the compatibilizing agent (C).

Claim 29 requires a filler (D).

Claims 30, and claims dependent therefrom, require a sheet of paper where the composition is provided directly on the paper.

It is submitted that **Jarvis** does not teach each and every element of the claimed invention as required for anticipation under 35 U.S.C. §102(b). Accordingly, the Examiner is respectfully requested to withdraw this rejection.

**IV. At page 3 of the Office Action, claims 1, 2, 4-9, 12, 13, 17, and 21-23 have been rejected under 35 USC § 102(b) as being anticipated by Shirakura '519.**

The Examiner states that **Shirakura** meets the limitations of the rejected claims.

**Shirakura** requires a substrate (i.e., paper) coated with a resin composition on an emulsion coated side of the substrate (col. 7, lines 15-17, and a resin composition containing titanium dioxide on its opposite (upper) side.

It is submitted that **Shirakura does not anticipate claims 12 and 17** (new claims 43 and 54, respectively), since **Shirakura** does not teach coating the resin on the substrate, but teaches coating the resin on an emulsion layer. See col. 7, lines 14-21, of **Shirakura**

Claim 28, and claims dependent therefrom, have been written to exclude an acid-modified polyolefin from compatibilizing agent (C). Claim 29 and claims dependent therefrom, require a filler (D) at a density of not less than 1.0 g/cm<sup>3</sup>. Claim 30 and claims dependent therefrom, require a sheet of paper where the composition is provided directly on the paper.

It is submitted that **Shirakura** does not teach each and every element of the claimed invention as required for anticipation under 35 U.S.C. §102(b). Accordingly, the Examiner is respectfully requested to withdraw this rejection.

V. *At pages 5-6 of the Office Action, claims 10 and 11 have been rejected under 35 USC 103(a) as being unpatentable over Shirakura '519 in view of the cited secondary references and knowledge in the art.*

Regarding claim 10, the Examiner contends that because **Shirakura** contains up to 60% titanium dioxide or up to 30% calcium carbonate, it would have been obvious that such resin compositions containing filler would have a density greater than  $1.0\text{g/cm}^3$ , because the density of the filler material is much greater than  $1.0\text{g/cm}^3$ .

Regarding claim 11, the Examiner states that it would have been obvious to add a dye to the resin of **Shirakura** which matches the paper and hides any undesirable effects, because **Gaveske** discloses that a dye can be added for aesthetic purposes and can be added to the coating composition for determining which portion of a surface has been covered by the coating composition.

Regarding claim 10, it is submitted that the combination of **Shirakura** and **Morganelli** is improper, because there is no motivation, incentive or suggestion supporting the combination.

**Shirakura** is directed to a support for photographic paper including a substrate and waterproof coating layers, and requires a high-density filler. **Morganelli** is directed to low-density hot melt adhesives for bonding materials like paper (book-binding), wood, cartons, etc., together, and requires a low-density filler.

**Morganelli teaches away** from compositions including high-density fillers. At col. 1, lines 33-36 and 48, **Morganelli** teaches that the combination of adhesive composition and high-density fillers, is unsatisfactory. Accordingly, **Morganelli teaches away** from **Shirakura**.

Likewise, **Shirakura** requires high-density fillers such as titanium dioxide in order to improve water-proofing properties. **Shirakura teaches away** from low-density fillers.

Regarding the rejection of claim 11, it is submitted that **Gaveske** does not suggest providing a composition that is the same color as the substrate.

**Gaveske** is directed to a method and composition for waterproofing. **Gaveske** states at col. 9, that the composition may optionally include a pigment to color the composition in order to improve appearance, and to determine which portion of the surface has been coated.

Contrary to the Examiner's assertion, **Gaveske** does not suggest providing a composition that is the same color as the substrate it is to be coated onto. In fact, **Gaveske teaches away** from such a composition, because **Gaveske** teaches that the inclusion of pigment is for the purpose of determining where the composition has been coated.

Accordingly, it is submitted that a proper case of *prima facie* obviousness has not been established, and thus claims 10 and 11 rewritten as new claims 29 and 40, are patentable over the applied prior art, within the meaning of 35 USC § 103. Thus, the Examiner is respectfully requested to withdraw this rejection.

In view of the aforementioned new claims and accompanying remarks, it is submitted that the new claims are in condition for allowance, which action, at an early date, is requested.

If, for any reason, it is felt that this application is not now in condition for allowance, the Examiner is requested to contact Applicants undersigned attorney at the telephone number indicated below to arrange for an interview to expedite the disposition of this case.



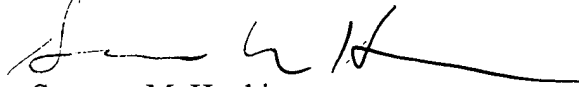
Amendment Under 37 CFR 1.111  
U.S. Patent Application Serial No. 10/019,301  
Reply to Office Action of **August 14, 2003**

December 15, 2003  
Page 19

In the event that this paper is not timely filed, Applicants respectfully petition for an appropriate extension of time. Please charge any fees for such an extension of time and any other fees which may be due with respect to this paper, to Deposit Account No. 01-2340.

Respectfully submitted,

ARMSTRONG, KRATZ, QUINTOS, HANSON & BROOKS, LLP



Susanne M. Hopkins  
Attorney for Applicant  
Reg. No. 33,247

SMH/nrp:lms

Atty. Docket No. 020001  
Suite 1000  
1725 K Street, N.W.  
Washington, D.C. 20006  
(202) 659-2930



23850

PATENT TRADEMARK OFFICE